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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 12

Application Number: 09/652,969  
Filing Date: August 31, 2000  
Appellant(s): DOAN, TRUNG T.

Charles B. Brantley II  
For Appellant

EXAMINER'S ANSWER

MAILED  
APR 19 2002  
GROUP 1700

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This is in response to the appeal brief filed March 8, 2002.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.  
Claims 38-40 stand finally rejected.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. There are no amendments subsequent to final rejection.

**(5) *Summary of Invention***

The summary of invention contained in the brief is generally correct. The present invention is directed to a removal system for a workpiece having an overlying material. The system comprises a suction application moveable with a nozzle. The nozzle has an extended position and a retracted position.

**(6) Issues**

The appellant's statement of the issues in the brief is correct. The issues are:

Whether claims 38-40 are unpatentable under 35 USC 103 over Iwata (USP 4,611,553) in view of Milina (USP 5,444,921).

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 38-40 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

| Patent Number | Inventor/Inventors | Publication Date |
|---------------|--------------------|------------------|
| 4,611,553     | Iwata et al        | 09-1986          |
| 5,444,921     | Milina             | 08-1995          |

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al (USP 4, 611, 553) in view of Milina (USP 5,444,921).

Iwata discloses an improved nozzle for removing edge portions 3 and 3' of a coated layer. The suction nozzle has a dual pipe structure (4 and 4') with a cleaning liquid jetting outlet (5 and 5') and a cleaning liquid sucking inlet (6 and 6') at one end thereof. Cleaning liquid supply ports 8 and 8' dispense liquid through the jetting outlets 5 and 5'.

Iwata fails to disclose that the nozzles can extend or retract.

Milina teaches in col. 4 lines 17-31 teaches a collar 18 coupled to axle 14 using a set screw 20. Set screw 20 allows the distance (gap distance) from the tip of nozzle 22 to the outer edge of the substrate 16 to be adjusted by raising or lowering the collar 18. The raising and lowering of the collar allows the nozzle to be extended and retracted.

The motivation to extend and lower the nozzle is provide ease of loading and unloading the wafer onto the holder.

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide a means such as the set screw of Milina to allow the double pipe nozzles of Iwata to extend and retract in the edge bead removal systems.

**(11) Response to Argument**

For clarity, examiner offers a brief summary of each reference.

Iwata teaches a suction nozzle for removing edge portions 3 and 3' of a coated layer. The nozzle has a dual pipe structure (4 and 4') with a cleaning liquid jetting outlet (5 and 5') and a

cleaning liquid sucking inlet (6 and 6') at one end thereof. Cleaning liquid supply ports 8 and 8' dispense liquid through the jetting outlets 5 and 5'.

Milina teaches a collar 18 coupled to axle 14 using a set screw 20. Set screw 20 allows the distance (gap distance) from the tip of nozzle 22 to the outer edge of the substrate 16 to be adjusted by raising or lowering the collar 18. The raising and lowering of the collar allows the nozzle to be extended and retracted.

*A. Examiner has misinterpreted Iwata*

Appellant has argued (page 3 ¶ 2) that claim 38 requires that the nozzle be disposed toward a workpiece. Appellant contends that Iwata fails to disclose such a limitation. Specifically, appellant argues that Iwata offsets its jetting outlet so that it is disposed toward the interior of Iwata's suction nozzle. If the jet of fluid only dispensed toward the interior of Iwata's suction nozzle, the apparatus would be inoperative in dispensing fluid to the workpiece. The nature of Iwata's invention is that it dispenses fluid towards the workpiece and the suction nozzle sucks the remaining fluid away.

Appellant further argues that claim 39 requires that the nozzle be configured to dispense a chemical toward a material overlying the workpiece. Appellant contends that Iwata fails to disclose such a limitation. The nature of Iwata's invention is that it dispenses fluid towards the workpiece and the suction nozzle sucks the remaining fluid away.

Appellant further argues that claim 40 requires the nozzle be configured to dispense the chemical toward a portion of the workpiece. Appellant contends that Iwata fails to disclose such

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a limitation. . The nature of Iwata's invention is that it dispenses fluid towards the workpiece and the suction nozzle sucks the remaining fluid away.

Appellant is referred to Fig.1 of Iwata, where the nozzle is clearly disposed toward a workpiece.

*B. Examiner has erred in attempting to combine Iwata and Milina*

Appellant argues that the teachings of Iwata and Milina conflict with each other and are unable to suggest solutions that cover the limitations in the appealed claims to one of ordinary skill in the art. Specifically, page 6, ¶1, appellant argues that an obviousness rejection requires that the multiple prior art references suggest to one of ordinary skill in the art to combine the references. Such a suggestion was given. Examiner noted that the motivation to combine the teachings of Iwata and Milina is to provide ease of loading and unloading the wafer onto the holder by extending and lowering the nozzle.

Appellant then argues that Iwata concerns a device for treating a particular type of workpiece, while Milina is not concerned with the preparation for treating a workpiece. This is an intended use argument, however a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

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See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Appellant argues that Milina's workpiece is generally circular semiconductor wafer, whereas Iwata's workpiece is an elongate flexible web. Examiner notes that the shape of the substrate is irrelevant since an apparatus is what it is and not what it does. Additionally, the type/shape of substrate is not claimed in the prevent invention. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., shape of the workpiece) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant also argues that the conflicts between workpiece handling techniques would prevent one from combining the teachings of Iwata and Milina. Again such as limitation was not recited in the claims.

Generally, the arguments regarding Milina are unpersuasive as appellant engaged in a piecemeal analysis of Milina. In contrast, examiner relied upon Iwata for the primary teaching of a dispensing nozzle and a suction nozzle. Milina was relied upon to teach the extension and retracting of the nozzles.

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant provides other spurious arguments as to why one would not combine Iwata and Milina. These arguments are on the basis of conflicts between Iwata and Milina on the grounds of workpiece processing, disposition of the nozzles, the dispensing location, and device-to-workpiece spacing.

Again, examiner relied upon Iwata for the primary teaching of a dispensing nozzle and a suction nozzle. Milina was relied upon to teach the extension and retracting of the nozzles.

Note that the examiner has relied upon the combined teachings of Iwata and Milina to provide a 103 rejection over the claimed invention, and has in no way cited that the references alone anticipate the claimed invention. The motivation to combine these references was to provide ease of loading and unloading the wafer onto the holder by extending and lowering the nozzle.

Finally, appellant contends that the only way the Examiner was able to sift through the legions of Iwata and Milina's directly opposing teachings and choose the particular portions is through hindsight, on page 9. The motivation to combine the teachings of Iwata and Milina was to provide ease of loading and unloading the wafer onto the holder by extending and lowering (retracting) the nozzle. This also allows for an adjustment of gap distance as recited on page 4 line23-27 of Milina. Note that the motivation to combine comes form the prior art and not from applicant's invention. 66In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge



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gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In summary, obviousness is determined based on the factual inquiries set forth in *Graham v. John Deere*, 383 U.S. In summary, obviousness is determined based on the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

In the instant appeal, the scope and contents of the prior art is best represented by Iwata, and the difference between Iwata and the claimed invention is the extending and retracting of the suction nozzle. This difference is fairly suggested by Milina, and both it and the claimed invention as whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

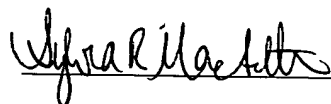
For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

Sylvia R. MacArthur

Assistant Examiner

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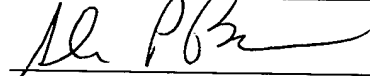
Gregory Mills

Supervisory Examiner

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Shrive Beck

Appeal Conferee

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